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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,283	03/27/2001	Manuel J. Alvarez II	5143-01704	2309

7590 12/23/2004  
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EXAMINER

ELAMIN, ABDELMONIEM I

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 12/23/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/818,283

Applicant(s)

ALVAREZ ET AL.

Examiner

A Elamin

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-305 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,9-11,13-15, 17, 23,25, 27,33,35,37,45,47,53,55,63, 65,67,73,75,81,83,89,91, 97,99,105,107, 113,121,123, 129,131,137,139, 145,147, 155,157,159,165,167, 169,175,177, 179,185-186,188-190,196,198-200,206,208,214-216,222,224,226,232,234,236,242-246,248-252,254-255,260-264,266-270,272,278-279,281-282,284,290,292,298,300 is/are rejected.
- 7) ☒ Claim(s) 2,4-8,12,16,18-22,24,26,28-32,34,36,38-44,46,48-52,54,56,58-62,64,66,68-72,74,76-80,82,84-88,90,92-96,98,100-104,106,108-112,114-120,122,124-128,130,132-136,138,140-144,146,148,150-154,156,158,160-164,166,168,170-174,176,178,170-184,187,191-195,197,201-205,207,209-213,217-221,223,225,227-231,233,235,237-241,247,253,256-259,265,271,273-277,280,283,285-289,291,293-297,299,301-305 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

attached  
notice of reference C. ten (PTO 892)

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims *1,3,9-11,13-15, 17, 23,25, 27,33,35,37,45,47,53,55,63, 65,67,73,75,81,83,89,91, 97,99,105,107, 113,121,123, 129,131,137,139, 145,147,155,157,159,165,167, 169,175,177, 179,185-186,188-190,196,198-200,206,208,214-216,222,224,226,232,234,236,242-246,248-252,254-255,260-264,266-270,272,278-279,281-282,284,290,292,298,300* are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi, US. Pat. No. 5,936,560.

3. Claims *1,3,9-11,13-15,17,23,25,27,33,55,57,63,234,236,242-246,248-252,254,260-264,266-270, 272, 278-279 and 281*, Higuchi teaches a method [*title, abstract*] comprising:

a parallel compression engine for compressing uncompressed data [*abstract, col.*

*3, line 66 thru col. 4, line 1*];

wherein the parallel compression engine is operable to:

maintain a history table comprising entries, wherein each entry comprises

at least one symbol [*abstract, col. 4, lines 1-3*];

receive the uncompressed data, wherein the uncompressed data comprises

a plurality of symbols [*abstract, col. 4, lines 2-3*];

compare the plurality of symbols with entries in the history table in a parallel fashion, wherein said comparing produces compare results [*abstract, col. 4, lines 1-3*];

determine match information for each of the plurality of symbols based on the compare results [*abstract, col. 4, lines 3-6*]; and

output compressed data in response to the match information [*abstract, col. 4, lines 1-13*].

Higuchi fails to teach a solid state memory (DRAM, DIMM, ...).

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a solid state memory (DRAM, DIMM, ...), because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

4. Claims 35, 37 and 48, Higuchi fails to teach a cache controller.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a cache controller, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware

5. Claims 45, 47 and 53, Higuchi fails to teach a bus bridge.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a bus bridge, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

6. Claims 6,67, Higuchi fails to teach an intelligent device.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in an intelligent device, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

7. Claims 73,75,81,83,89,91,97,99, 105 and 107, Higuchi fails to teach network hub.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in network hub, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

8. Claims 113, 115, Higuchi fails to teach a multiplexer.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of

Higuchi in a multiplexer, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

9. Claims 121, 123, Higuchi fails to teach a demultiplexer.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a demultiplexer, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

10. Claims 129, 131, Higuchi fails to teach a terminal server.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a terminal server, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

11. Claims 137, 139, 145, 198-200, Higuchi fails to teach a network interface card.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a network interface card, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

12. Claims 147, 149, 155, Higuchi fails to teach an ISDN adapter.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in an ISDN adapter, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

13. Claims *157,159,165*, Higuchi fails to teach an ATM adapter.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in an ATM adapter, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

14. Claims *167,169,175,177,179,185-186*, Higuchi fails to teach a modem.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a modem, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

15. Claims *188-190,196*, Higuchi fails to teach a DSL adapter.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of

Higuchi in a DSL adapter, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

16. Claims 206, 208, Higuchi fails to teach a set-top box.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a set-top box, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

17. Claims 214-216, 222, 226, Higuchi fails to teach a digital-to-analog converter.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a digital-to-analog converter, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

18. Claim 232, Higuchi fails to teach an analog-to-digital converter adapter.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in an analog-to-digital converter, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.



Art Unit: 2116

19. Claim 282, 284, Higuchi fails to teach a scanner.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a scanner, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

20. Claims 290, 292, Higuchi fails to teach a PDA.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a PDA, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

21. Claims 298, 300, Higuchi fails to teach a cellular phone.

However, Examiner asserts that these types of limitations are considered field of use, and are not patentably distinct. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Higuchi in a cellular phone, because it enables high-speed data compression irrespective of the pattern of the input data and which can be easily implemented by hardware.

***Allowable Subject Matter***

22. Claims 2, 4-8, 12, 16, 18-22, 24, 26, 28-32, 34, 36, 38-44, 46, 48-52, 54, 56, 58-62, 64, 66, 68-72, 74, 76-80, 82, 84-88, 90, 92-96, 98, 100-104, 106, 108-112, 114-120, 122, 124-128, 130, 132-

Art Unit: 2116

136,138,140-144,146,148,150-154,156,158,160-164,166,168,170-174,176,178,170-184,187,191-195,197,201-205,207,209-213,217-221,223,225,227-231,233,235,237-241,247,253,256-259,265,271,273-277,280,283,285-289,291,293-297,299,301-305 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

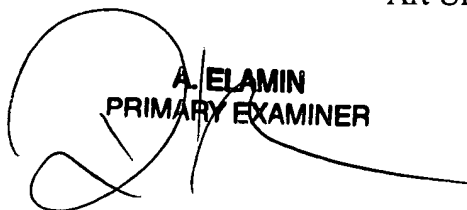
Any inquiry concerning this communication or earlier communications from the examiner should be directed to A Elamin whose telephone number is (571) 272-3674. The examiner can normally be reached on MON-FRI 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A Elamin  
Primary Examiner  
Art Unit 2116

December 21, 2004

  
**A. ELAMIN**  
**PRIMARY EXAMINER**